

Quick Guide:

CONNECTING THE FUTURE WITH PRIVATE NETWORKS

**5 ways private networks can enable your digital
transformation – and 10 things to consider**

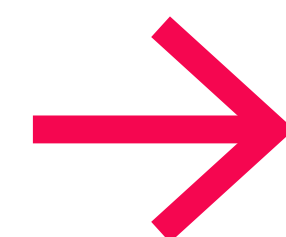
The evolving enterprise

From airports to energy grids, organizations are transforming. They're deploying new technologies to become smarter, more automated, and more connected. But these transformation initiatives can't succeed without a fundamental enabler: connectivity.

When connectivity is business-critical, it's risky to have data travel over public networks – not only are they inherently less reliable, end-to-end security is not guaranteed. That's why organizations are investing in private networks - strategic assets that enable real-life data, automation, and mission-critical communications.

No matter the sector, a private network can unlock new efficiencies, revenue opportunities, improve safety, and accelerate sustainability initiatives.

Let's explore 5 ways private networks are shaping the future of connected organizations



1

Supporting digital transformation

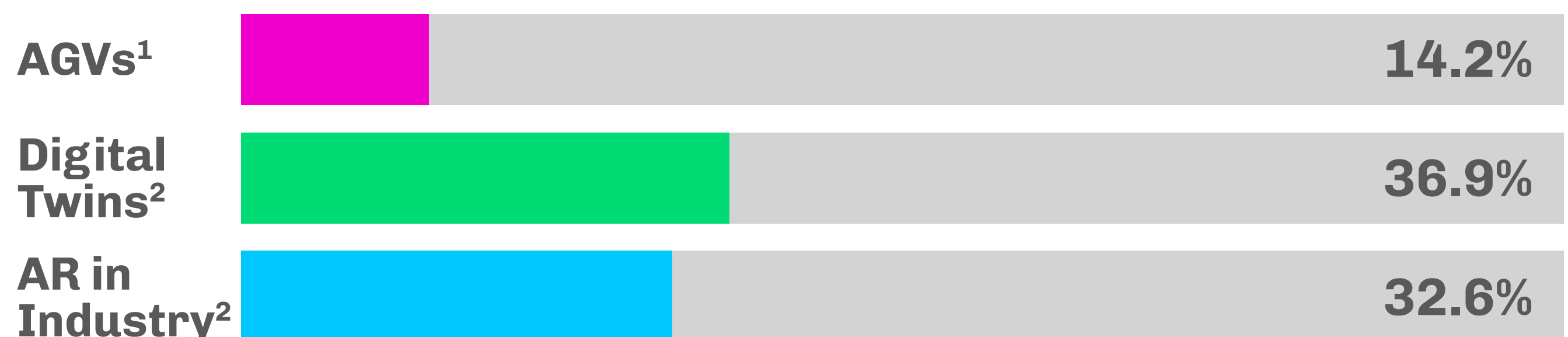
Industry 4.0 is on the rise, with more enterprises embracing solutions like digital twins, robotics, AI, and AR/VR. These once-futuristic technologies are transforming operational efficiency.

But these technologies demand more than just bandwidth. They require guaranteed, low-latency, high-throughput connectivity.

The role of private networks:

- Enable real-time data transfer from sensors and devices
- Support AR/VR for training, maintenance, and remote support
- Power autonomous systems like vehicles and robots
- Keep data local for security and compliance

From 2024 to 2030, Industry 4.0 technologies are predicted to grow by:



¹ Industry 4.0 Market Size & Share Analysis - Growth Trends & Forecasts; Mordorintelligence.com

² Industry 4.0 Market Size, Share And Growth Report, 2030; Grandviewresearch.com

2 Improving operational efficiency

In any complex organization, efficiency is key. From automated logistics to predictive maintenance, private networks are helping organizations streamline operations, reduce downtime and adapt to workforce challenges.

With fewer people on the ground and more devices in motion, the need for real-time data, automation, and seamless communication is greater than ever. Private networks provide the high-capacity, low-latency infrastructure needed to power these innovations, keeping operations running smoothly, even under pressure.

The role of private networks:

- Real-time monitoring and control of machines, vehicles, and infrastructure
- Predictive maintenance to reduce unplanned downtime and extend asset life
- Seamless communication across large, complex, or remote sites
- Wireless flexibility to reconfigure production lines or logistics flows quickly
- Support for collaborative robots, AGVs, and digital twins

Predictive maintenance can reduce costs by up to **30%** and equipment breakdowns by up to **75%**, leading to a **10–20%** improvement in overall equipment effectiveness and increase equipment uptime by **20%**.

Source: McKinsey, Aberdeen Group

3

Enhancing safety and security

Whether it's a refinery, airport, or factory floor, safety is non-negotiable. Private networks enable real-time threat detection, secure communications, and automation that removes people from harm's way.

The role of private networks:

- Smart wearables and sensors for worker safety
- Push-to-talk/video for mission-critical comms
- Real-time video surveillance and AI-based threat detection
- Secure, encrypted data transmission for sensitive operations

“

Private networks provide security – no need to worry about hacking or reliance on public telecom networks since a private core network is in use and it's on our site.”

Karri Kangas, System Analyst, Steveco

50%

Logistics and warehousing, smart clothing has helped reduce response times to incidents by up to 50%, thanks to automated alerts and geolocation features

Source: oteplace.com, Smart PPE. How Connected Safety Gear is Reducing Workplace Injuries & Boosting Productivity

4

Driving sustainability

Private networks support smarter energy use, emissions monitoring, and automation that reduces waste. They're a key enabler of ESG and Net Zero strategies.

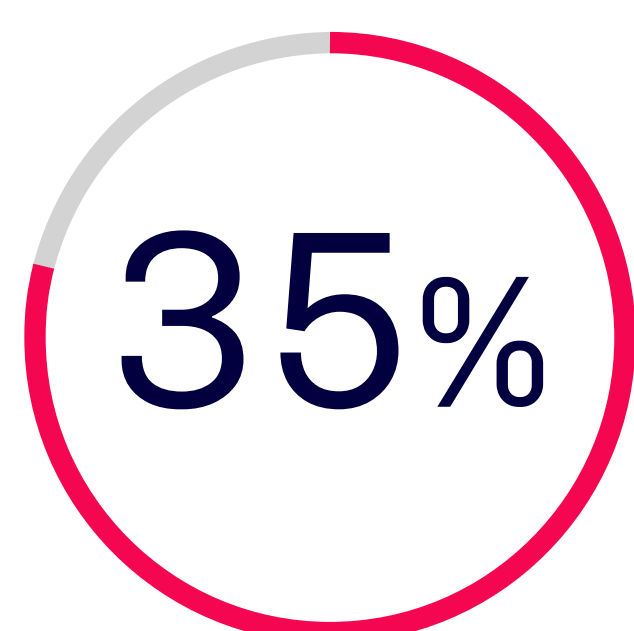
The role of private networks:

- Real-time energy and emissions monitoring
- Smart HVAC, lighting, and climate control
- Support for electric and autonomous vehicles
- Enable remote operations to reduce travel and emissions

Private networks support low-power IoT devices and enable real-time data collection, key to improving energy efficiency and reducing environmental impact.

Digital tools like predictive maintenance and digital work management have increased profitability by 4 to 10% in some industrial organizations

Source: McKinsey & Company



of organizations reported a 10% or greater reduction in emissions after deploying a wireless private network

Source: Nokia 2024 Industrial Digitalization Report

5 Ensuring business continuity

In critical environments, downtime isn't an option. Private networks offer guaranteed capacity and coverage to keep data flowing and operations running 24x7.

The role of private networks:

- Dedicated, always-on connectivity for mission-critical systems
- Rapid deployment in remote or underserved areas
- Tactical cellular 5G networks for emergency response
- Full control over network performance and security

Private networks typically offer up to 99.999% availability, reducing the risk of downtime compared to shared public networks.

How private networks are already supporting business continuity

Up to 30%

fewer unplanned outages due to the dedicated nature of the infrastructure experienced by industries

Up to 25%

improvement in operational continuity for AGVs* and AMRs* in logistics firms

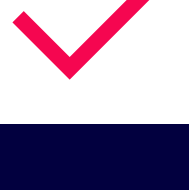
Up to 20%

faster recovery times following network-related incidents in manufacturing

* Automated Guided Vehicles and Autonomous Mobile Robots
Source: IoT Business News

Your path to a connected future

Here are 10 questions to ask yourself as you plan your private network journey:

- Do we need to collect and act on data in real-time (e.g. for automation or remote controlled equipment?) 
- Are we planning to use predictive maintenance to reduce downtime and extend asset life? 
- Do we need reliable connectivity in operating environments that are large, complex, or remote? 
- Is improving worker safety—with smart wearables, sensors, and real-time monitoring—a priority? 
- Do we need to keep data secure and on-site for compliance purposes? 
- Do we plan to deploy AR or VR for remote support, training, or assisted maintenance? 
- Do we need to reduce energy consumption and emissions as part of our sustainability or ESG goals? 
- Are we planning to replace legacy communications with mission-critical voice and video (PTT/PTV)? 
- Do we need a network that can reliably support a high density of devices and/or IoT sensors? 
- Would our people or organization be at risk if our network connectivity failed? 

If any of these apply to your organization, a private network could be the way forwards.

Start your private network journey today

Boldyn Networks has been designing, deploying and managing fully-private, dedicated wireless networks for customers worldwide for over 10 years. If you'd like to talk about how a private network could benefit your organization, we'd be delighted to help.





Boldyn Networks delivers the advanced shared network infrastructure needed for a smart, inclusive, and sustainable future. We enable connected transit, venues, enterprises, heavy industry, college campuses and smart cities to create new possibilities in the way people live, work and play.

We don't just talk about the future. We exist to help build it. Creating the foundation from which a better collective future can be imagined.